

Government Releases First Obesity Clinical Guidelines

In June, the Federal government released its first *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*.

The release came amid a flurry of media coverage due to a leak of part of the guidelines before the official release. The double dose of coverage brought the guidelines' message of the dangers of overweight and obesity to virtually every American.

After smoking, obesity and overweight comprise the second most preventable cause of death in the United States. Dr. Claude Lenfant, director of the National Heart, Lung, and Blood Institute (NHLBI), called the conditions "a serious public health challenge."

About 97 million Americans—55 percent of the population—are now overweight or obese, and the number is increasing. The total cost attributable to obesity-related disease in the United States approaches \$100 billion annually.

The guidelines were issued by the NHLBI, in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), both part of the National Institutes of Health. Developed by a 24-member expert panel using an evidence-based approach, the guidelines

are meant to help physicians in their care of overweight and obese patients.

"The guidelines are based on the most extensive review to date of the scientific evidence on overweight and obesity," said Dr. F. Xavier Pi-Sunyer, who chaired the expert panel. He is director of the Obesity Research Center at St. Luke's/Roosevelt Hospital Center in New York City. "The evidence includes data from about 236 randomized controlled clinical trials, which form the basis for many of the recommendations.

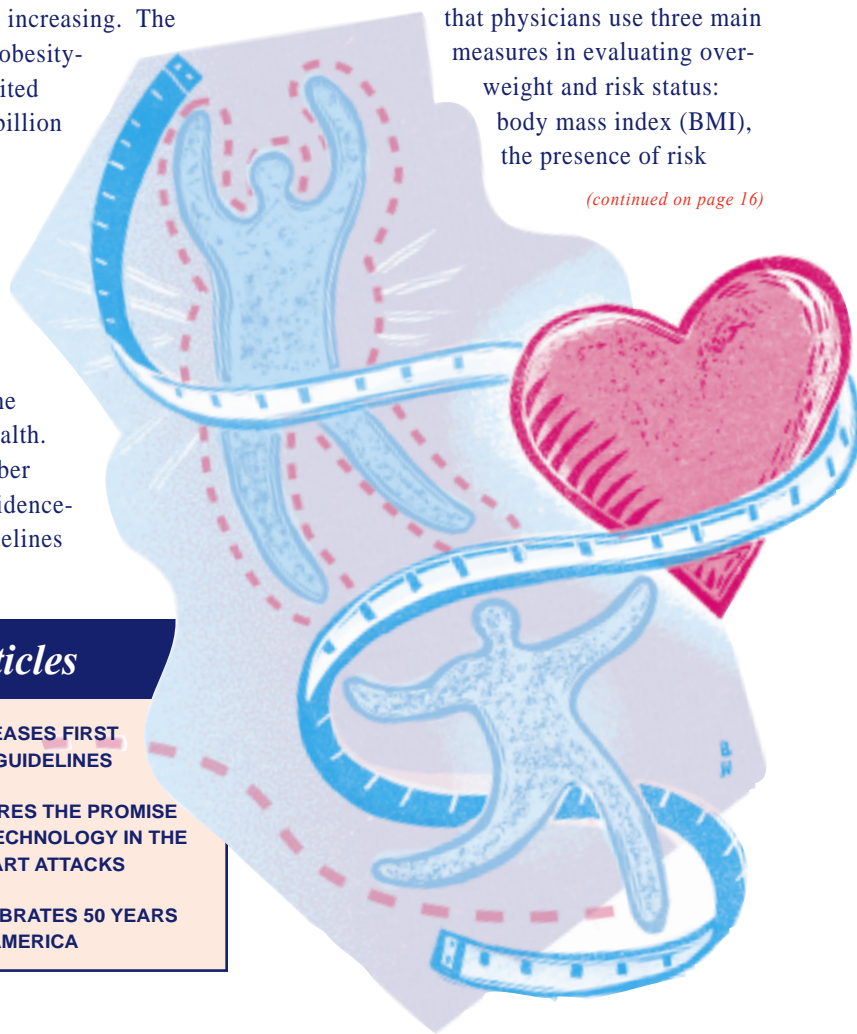
"The resulting clinical practice guidelines present a new approach for physicians to use in assessing overweight and obesity," he continued. "They also establish principles of safe and effective weight loss."

A key recommendation is that physicians use three main measures in evaluating overweight and risk status: body mass index (BMI), the presence of risk

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Letter From the Director

DEAR *HEARTMEMO* READERS:

Over the course of this, the 50th year of the NHLBI, I have reflected on the astounding progress we have made in the assessment, treatment, and prevention of coronary heart disease (CHD). This issue of *HeartMemo* looks back on the milestones of the past half century through the prism of the Framingham Heart Study (see page 22). The findings that have emerged and continue to emerge from that revolutionary study have truly saved countless lives. When we think with nostalgia about the 1940s and 1950s, it is sobering to remember that those were also days when, due to CHD, many more children were prematurely left fatherless or motherless, and fewer grandparents lived to see their grandchildren grow up or even be born.

Looking ahead, the article on medical informatics and heart attacks (see page 3) gives us a peek into a future that will be influenced increasingly by technology in ways that the founders of the Framingham Heart Study surely never dreamed. In fact,

most of the applications discussed in the article—such as telemedicine, large-scale databases, and interactive Web sites—are already in existence, and it is only a matter of time before many become more widespread and more sophisticated.

“When we think with nostalgia about the 1940s and 1950s, it is sobering to remember that those were also days when... fewer grandparents lived to see their grandchildren grow up or even be born.”

Some of the most significant strides that have been made related to health in the past 50 years have been cultural. As risk factors for disease have been identified, and as it became clear that lifestyle modifications can sometimes prevent disease or change

its course, more health care professionals have come to view their patients as partners rather than passive observers. Likewise, the public has begun to take more responsibility for its own health. The new Federal obesity guidelines and the ongoing education efforts in cholesterol, high blood pressure, sleep disorders, and minority populations all attest to this fundamental behavioral shift. The challenge now is to partner with the many more Americans that the NHLBI's messages have not yet reached, and to make every health care professional a voice for prevention.

Because of the confidence we can have in the heart research that has been done so far and the exciting possibilities we know are ahead, I feel certain that the next 50 years will be as inspiring and transformative as the first. ■



Claude Lenfant, M.D.
Director, NHLBI

Symposium Explores the Promise of Information Technology in the Fight Against Heart Attacks

When chest pain gripped Dr. Mark Smith in the middle of the night earlier this year, he ignored his own best advice—to call 9-1-1. “What did I do?” asked Dr. Smith, chairman, Department of Emergency Medicine, Washington Hospital Center, Washington, DC. “I stumbled into the bathroom, took some antacid, and went back to bed, hoping that what I was having was the heartburn of esophagitis and not the pain of a heart attack. . . . I would have liked to have had a home ECG machine that I could have strapped onto myself, taken a tracing that would have been compared automatically to my previous ECG that was stored, and then be informed by the machine whether or not ST-segment elevation or some other change from my previous tracing was present.” Sound like something out of the X-Files? It may be closer to reality than you think.

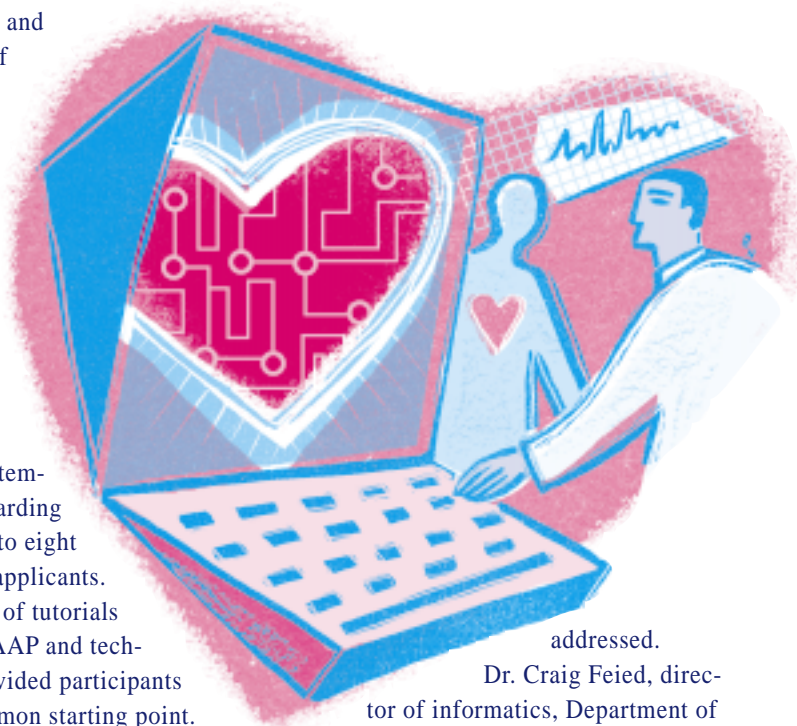
Dr. Smith relayed his experience, which thankfully proved to be caused by esophagitis, or heartburn, at an exciting symposium he chaired last April, called “New Information Technology and the National Heart Attack Alert Program: Setting a Five-Year Agenda.” In an unprecedented partnership, the NHLBI, the National Library of Medicine (NLM), and the Agency for Health Care Policy and Research (AHCPR) cosponsored the event, which explored the role of technology in furthering the mission of the National Heart Attack Alert Program (NHAAP).

The meeting sparked plans for using medical informatics, or the medical application of information technology, to increase the early

recognition and treatment of individuals with symptoms and signs of a heart attack. It led to a call for proposals on medical informatics and, in September, the awarding of funding to eight promising applicants.

A series of tutorials on the NHAAP and technology provided participants with a common starting point. Dr. James M. Atkins, medical director, Emergency Medicine Education, University of Texas Southwestern Medical Center at Dallas, spoke about the achievements of the NHAAP since 1991, which have included helping improve the rapid identification and treatment of heart attack patients in the emergency department. Dr. Atkins also outlined the challenges still facing the NHAAP, particularly in reducing patient delay.

Several speakers then focused on the promise and limitations of particular technologies. Although the pace of technology in recent years has transformed many aspects of health care, frustrating hurdles have arisen. Problems and potential solutions in the areas of Internet congestion, confidentiality of medical records, and data standardization and access were



addressed.

Dr. Craig Feied, director of informatics, Department of Emergency Medicine, Washington Hospital Center, Washington, DC, described the Next Generation Internet, a multi-agency Federal program whose goal is to connect national laboratories and universities with networks that are 1,000 times faster than today's Internet. Similarly, Internet 2, a project of the University Corporation for Advanced Internet Development, unites universities with public and private researchers to develop entirely new Internet products that will facilitate innovations in research and education. These advanced versions of the Internet will enable shared access to large health data sets and the use of virtual reality for telemedicine.

Dr. Paul Clayton, professor and chair, Department of Medical Informatics, Columbia University, New

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The National High Blood Pressure Education Program

NEW CLINICAL TRIAL RESULTS CONFIRM JNC VI RECOMMENDATIONS

It has been a year since the National High Blood Pressure Education Program (NHBPEP) released *The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC VI). The JNC VI

report provided clinicians with evidence-based and consensus recommendations for prevention strategies and lifestyle and pharmacologic treatment of high blood pressure. Since the report was released, several randomized controlled trials and other studies have been published. At its meeting in September, the NHBPEP Coordinating Committee reviewed the results of recent trials and discussed how the findings may impact the JNC VI recommendations.

Lifestyle Modifications

Increasing scientific evidence from sources such as the Trials of Hypertension Prevention¹ confirms that losing weight is probably the most important thing a person can do to prevent or control high blood pressure. However, new studies also have provided data on the effects of potassium, magnesium, and alcohol intake.

Based on the results of the DASH (Dietary Approaches to Stop Hyper-

tension) study² and others, there is mounting evidence that adequate potassium intake (about 90 mmol per day), as recommended in the JNC VI report, helps lower blood pressure. A new study indicates that taking magnesium supplements also may lower blood pressure slightly.³ However, yet another study,⁴ which examined the effects of potassium, calcium, and

Study participants did not achieve the expected alcohol reduction; therefore, blood pressure lowering was less than expected. The authors noted that although moderating alcohol intake is important for overall health, it is only one part of therapy to lower blood pressure.

Pharmacologic Therapy

A recent followup to the Systolic Hypertension in the Elderly Program (SHEP)⁶ examined metabolic effects, such as lipid levels, in patients given a diuretic versus patients given a placebo. This analysis confirmed that diuretics

reduced cardiovascular morbidity and mortality, which supports the JNC VI recommendation to use diuretics as a first-line treatment for uncomplicated hypertension.

Several recent trials compared ACE inhibitors to other drugs in patients with and without diabetes.⁷⁻⁸ All of the studies provided further evidence that ACE inhibitors lower

JNC VI LIFESTYLE RECOMMENDATIONS

- Lose weight if overweight.
- Limit alcohol intake.
- Increase aerobic activity to 30 to 45 minutes most days of the week.
- Reduce sodium intake. The goal is not more than 100 mmol per day.
- Maintain adequate intake of potassium (about 90 mmol per day).
- Maintain adequate intakes of calcium and magnesium for general health.
- Stop smoking for overall cardiovascular health.
- Reduce intake of dietary fat and cholesterol.

magnesium supplements separately and in combination, concluded that only potassium lowered blood pressure. Clearly, more research is needed on the effect of magnesium and calcium on blood pressure.

The Prevention and Treatment of Hypertension Study (PATHS)⁵ reported that consuming large amounts of alcohol may raise blood pressure.

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blood pressure, although usually in combination with other drugs. ACE inhibitors also provide some renal protection in patients with diabetes. The JNC VI report states that there is compelling evidence to use ACE inhibitors in type 1 diabetes and that ACE inhibitors may have favorable effects in type 2 diabetes. This new information provides more evidence that ACE inhibitors can be helpful in type 2 diabetes as well as type 1.

The Hypertension Optimal Treatment (HOT) study⁹ attempted to refine the maximum benefit to blood pressure levels as a result of treatment. The investigators treated patients until they reached a diastolic blood pressure goal of below 90, below 85, or below 80 mmHg. All three groups showed reductions in mortality and morbidity. At these levels, no J-curve—that is, an increase in morbid events at the lower pressure levels—was evident. HOT supports the JNC VI report recommendation of a treatment blood pressure goal of below 140/90.

The evidence that has emerged over the past year has upheld or strengthened the JNC VI recommendations. As additional findings are revealed over the next few years, the NHBPEP will be watching closely to see if they cast a new light on the JNC VI recommendations.

HIGH BLOOD PRESSURE EDUCATION MONTH MATERIALS ONLINE

May is National High Blood Pressure Education Month, and now is the time for community organizers and health departments to begin planning for health promotion and education activities. The theme for this year's activities is "If Your Blood Pressure Is Not Lower Than 140/90, Ask Your Doctor Why."

The focus will be on the value of lowering blood pressure in those with high blood pressure (above

bulk materials through the site.

Important messages to highlight during National High Blood Pressure Education Month are:

- Controlling high blood pressure to below 140/90 mmHg can dramatically reduce your chances for having a stroke or heart attack and add years to your life—time you can cherish with your spouse, children, grandchildren, and friends.
- Only one out of four people with high blood pressure is controlling it. We can do better!
- Preventing high blood pressure

is possible by maintaining an ideal weight, increasing exercise, reducing salt in the diet, moderating alcohol use, and increasing potassium in the diet. These strategies can also help control high blood pressure in many individuals.

- Encouraging family members or friends with high blood pressure to stay on therapy is one of

the best ways to help them control it.

Screening activities, walk-athons, health fairs, and media events have been scheduled during May to celebrate the progress made in reducing the rates of death from heart disease and stroke. National High Blood Pressure Education Month is an ideal time for health professionals to focus on ways to continue this progress.

For more information, contact the NHLBI Information Center.

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JNC VI PHARMACOLOGIC RECOMMENDATIONS

- Start with a diuretic or beta-blocker unless compelling indications exist.
- Compelling indications for coexisting conditions:
- Diabetes mellitus (type 1 with proteinuria): angiotensin converting enzyme (ACE) inhibitor.
- Heart failure: ACE inhibitor or diuretic.
- Isolated systolic hypertension: diuretic (preferred) or calcium antagonist.
- Myocardial infarction: non-ISA beta-blocker; ACE inhibitor with LVH.

140 mmHg systolic or 90 mmHg diastolic), with increased emphasis on preventing it from rising in those with high-normal blood pressure (between 130 and 139 systolic or 85 and 89 diastolic).

As in the past, a kit will be available from the NHLBI Information Center. Beginning April 1, you will be able to download the kit from the NHLBI Web site, <http://www.nhlbi.nih.gov>, making it easy to pick and choose the materials that would work best for your program. You can also order

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DIET CAN HELP LOWER BLOOD PRESSURE

How much can changing your diet really improve your blood pressure? Most of the research, until now, has focused on the effects of only one nutrient on blood pressure, rather than combinations of nutrients. However, a recently released study, the Dietary Approaches to Stop Hypertension (DASH) trial, investigated how an entire diet plan—and the combination of nutrients—influences blood pressure. From this study, the investigators developed an eating plan designed to lower elevated blood pressure.


The study compared three different eating patterns: a plan similar to what many Americans consume; a plan similar to what many Americans consume but higher in fruits and vegetables; and a combination plan—the DASH diet—lower in saturated fat, total fat, and cholesterol and rich in fruits, vegetables, and low-fat dairy foods. All of the foods included in the study were commonly available.

The study participants agreed to consume only food provided by the staff. Participants included 459 adults with systolic blood pressure of less than 160 mmHg and diastolic blood pressure of 80 to 95 mmHg. Not all participants had high blood pressure. About half of the participants were women and 60 percent were African Americans.

Results showed that both the fruit/vegetable and the combination plans reduced blood pressure, but the combination plan—the DASH diet—had the greatest effect. The DASH diet reduced systolic blood pressure among all participants by an average of almost 6 mmHg and diastolic blood pressure by about 3 mmHg. For those people in the



The DASH diet reduced... blood pressure among all participants... Further, the reductions came fast—within 2 weeks of starting the eating plan.



study with high blood pressure, the results were more dramatic: they had an average decrease in systolic blood pressure of 11 mmHg and diastolic blood pressure of 6 mmHg. Further, the reductions came fast—within 2 weeks of starting the eating plan.

To help people adopt the plan, the NHLBI has developed a fact sheet that explains how to change to the DASH diet. The booklet includes a detailed 7-day menu plan with specific foods, serving sizes, and nutritional assessment of each

day's menu. It also includes forms to track eating habits, recipes, and many tips on changing your diet. For example, the tips on eating the DASH way include:

- To increase your servings of fruits and vegetables to eight per day, try to have two servings of fruits and/or vegetables at each meal plus one fruit and one vegetable as a snack.
- To increase your dairy servings to three a day, try to have one low-fat dairy serving at each meal. Try taking lactase enzyme pills if you have trouble digesting dairy products.
- Choose whole-grain foods to get added nutrients, especially the B vitamins.
- Use the percent daily value on food labels to compare products.
- Feed your craving for sweets with fresh or dried fruit or fruit-flavored gelatin.
- Use fresh, frozen, canned, or dried fruits.
- Use fresh, frozen, or no-salt-added canned vegetables.

So go ahead, try the DASH diet and help lower your blood pressure. One note, though: if you have high blood pressure and take medication, you should not stop your therapy. Use the DASH diet and talk to your doctor about your high blood pressure treatment.

The DASH diet fact sheet is available from the NHLBI Information Center (#4082, single copy free). ■

Additional information is available on the Web at <http://dash.bwh.harvard.edu>.

FOLLOWING THE DASH DIET

The DASH eating plan shown below is based on 2,000 calories a day. The number of daily servings in a food group may vary from those listed, depending on your caloric needs.



Use this chart to help plan your menus, or take it with you when you go to the store.

Food Group	Daily Servings (except as noted)	Serving Sizes	Examples and Notes	Significance of Each Food Group to the DASH Eating Plan
Grains & grain products	7-8	1 slice bread 1/2 cup dry cereal* 1/2 cup cooked rice, pasta, or cereal	whole-wheat bread, English muffin, pita bread, bagel, cereals, grits, oatmeal, crackers, unsalted pretzels, popcorn	major sources of energy and fiber
Vegetables	4-5	1 cup raw leafy vegetable 1/2 cup cooked vegetable 6 oz vegetable juice	tomatoes, potatoes, carrots, green peas, squash, broccoli, turnip greens, collards, kale, spinach, artichokes, green beans, lima beans, sweet potatoes	rich sources of potassium, magnesium, and fiber
Fruits	4-5	6 oz fruit juice 1 medium fruit 1/4 cup dried fruit 1/2 cup fresh, frozen, or canned fruit	apricots, bananas, dates, grapes, oranges, orange juice, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, prunes, raisins, strawberries, tangerines	important sources of potassium, magnesium, and fiber
Low-fat or fat-free dairy foods	2-3	8 oz milk 1 cup yogurt 1 1/2 oz cheese	fat-free (skim) or low-fat (1%) milk, fat-free or low-fat buttermilk, fat-free or low-fat regular or frozen yogurt, low-fat and fat-free cheese	major sources of calcium and protein
Meats, poultry, & fish	2 or less	3 oz cooked meats, poultry, or fish	select only lean; trim away visible fats; broil, roast, or boil, instead of frying; remove skin from poultry	rich sources of protein and magnesium
Nuts, seeds, & dry beans	4-5 per week	1/3 cup or 1 1/2 oz nuts 2 Tbsps or 1/2 oz seeds 1/2 cup cooked dry beans	almonds, filberts, mixed nuts, peanuts, walnuts, sunflower seeds, kidney beans, lentils, and peas	rich sources of energy, magnesium, potassium, protein, and fiber
Fats & oils**	2-3	1 tsp soft margarine 1 Tbsp low-fat mayonnaise 2 Tbsps light salad dressing 1 tsp vegetable oil	soft margarine, low-fat mayonnaise, light salad dressing, vegetable oil (such as olive, corn, canola, or safflower)	besides watching fats added to foods, choose foods that contain less fat
Sweets	5 per week	1 Tbsp sugar 1 Tbsp jelly or jam 1/2 oz jelly beans 8 oz lemonade	maple syrup, sugar, jelly, jam, fruit-flavored gelatin, jelly beans, hard candy, fruit punch, sorbet, ices	sweets should be low in fat

* Serving sizes vary between 1/2 and 1 1/4 cups. Check the product's nutrition label.

** Fat content changes the serving sizes for fats and oils. For example, 1 Tbsp of regular salad dressing equals 1 serving; 1 Tbsp of a low-fat dressing equals 1/2 serving; 1 Tbsp of a fat-free dressing equals 0 serving.

The National Cholesterol Education Program

NATIONAL CHOLESTEROL EDUCATION MONTH

As with September of every year since 1989, this past September was designated National Cholesterol Education Month. To support cholesterol education activities in the month and throughout the year, the National Cholesterol Education Program (NCEP) produced its Cholesterol Kit '98. In addition to a variety of NCEP materials, the kit contains an article that

summarizes recent declines in cholesterol levels of adolescents and adults, presents the results of recent clinical trials that prove the benefits of cholesterol lowering in primary prevention and in patients with coronary heart disease (CHD), and highlights the critical importance of cholesterol lowering in patients with CHD. Educational program planners are offered suggestions on how to use the kit. New in this year's version of the kit are educational materials developed especially for women, African Americans, and Lati-

nos. The kit can be found on the Web by going to the NHLBI home page at <http://www.nhlbi.nih.gov>. Hard copies of the kit can be ordered through the NHLBI Information Center while supplies last. Cholesterol Kit '99 will be available this fall.

In conjunction with Cholesterol Month, on September 1 the NCEP launched an interactive Web site, "Live Healthier, Live Longer," which was developed especially for people with heart disease. See next page for more information about the site.

LIVE HEALTHIER, LIVE LONGER WEB SITE

Visitors to this site may:

- Enter their own LDL-cholesterol level and learn what their physician is likely to prescribe to lower it to ≤ 100 mg/dL.
- Get an estimate of their daily dietary allowances for saturated fat, total fat, cholesterol, calories, and sodium based on their height, weight, age, sex, and activity level.
- Select specific foods for meals and receive a report detailing the amount of saturated fat, total fat, cholesterol, calories, and sodium for each meal and the entire day. These totals are compared with daily dietary allowances.
- Learn how to read food labels in the grocery store.
- Learn how to recognize serving sizes.
- Get heart-healthy recipes.
- Understand how drugs lower cholesterol.
- Take a cholesterol and heart I.Q. test.
- Discover how physical activity helps them stay healthy.



INTERACTIVE WEB SITE: LIVE HEALTHIER, LIVE LONGER

The new Web site is designed to provide accurate, personally relevant information to help people with CHD lower their LDL-cholesterol to the goal level of ≤ 100 mg/dL. "Recent studies have proven that people with CHD can prevent heart attacks and actually prolong their lives by lowering their blood cholesterol levels," says Dr. James Cleeman, NCEP coordinator. "The goal of the Web site is to transform this health message into simple and practical steps to success in cholesterol lowering."

The informative site features activities to help people with CHD eat less saturated fat and cholesterol, become more physically active, lose weight if they are overweight, and adhere to their prescribed medical regimen. The Cyber Kitchen, Virtual Grocery Store, Cyber Cafe, Diet Calculator, and Virtual Fitness Room offer visitors a fun, interactive way to obtain information on cholesterol lowering. Dr. Cleeman says more attention to cholesterol lowering is needed in high-risk people with CHD. Although an estimated 80 to 85 percent of people with CHD would benefit from cholesterol lowering by diet or drugs, only one-third to one-half are currently receiving active treatment. The "Live Healthier, Live Longer" site can be found by going to the NHLBI home page at <http://www.nhlbi.nih.gov>. The interactive site is currently under "What's New" and will remain prominently featured. See box, left.

RECENT CLINICAL TRIALS PROVE BENEFITS OF CHOLESTEROL LOWERING

In the past year, there has been further clinical trial evidence that confirms the benefits of cholesterol

lowering in patients with and without CHD. The Long-Term Intervention with Pravastatin in Ischaemic Disease (LIPID) study examined the effects of cholesterol lowering in people with CHD (those who previously had experienced a myocardial infarction [MI] or hospitalization for unstable angina) and who had relatively average cholesterol levels (median total cholesterol 218 mg/dL, median LDL-cholesterol 150 mg/dL). The LIPID study used the HMG-CoA reductase inhibitor pravastatin to lower cholesterol levels in the treatment group.

In the past year, there has been further clinical trial evidence that confirms the benefits of cholesterol lowering in patients with and without CHD.

All study participants were counseled about following a cholesterol-lowering diet. The LIPID results showed that a drop of 18 percent in total cholesterol and 25 percent in LDL-cholesterol produced a 24 percent decrease in deaths from CHD among the treatment group compared with the control group. Similarly, cholesterol lowering in the treatment group reduced total mortality by 22 percent, myocardial infarction by 29 percent, death from CHD or nonfatal MI by 24 percent, the need for coronary revascularization by 20 percent, and stroke by 19 percent. The benefits of treatment in reducing coronary events were observed in all the study subgroups, including patients with the lowest baseline LDL-cholesterol levels. Cholesterol lowering in the

LIPID study resulted in significant reductions in CHD-related deaths and events without increasing non-CHD deaths from cancer, trauma, or suicide. The LIPID study was published in the November 5, 1998, issue of the *New England Journal of Medicine*.

Another recent clinical trial, the Air Force/Texas Coronary Atherosclerosis Prevention Study (AFCAPS/TexCAPS), which was published in the May 27, 1998, issue of the *Journal of the American Medical Association*, studied cholesterol lowering in generally healthy people with no clinical evidence of CHD who had relatively average total cholesterol (mean of 221 mg/dL) and LDL-cholesterol (mean of 150 mg/dL) levels and below-average HDL-cholesterol levels (mean of 36 mg/dL for men and 40 mg/dL for women). This primary prevention trial used lovastatin, an HMG-CoA reductase inhibitor, along with a low-saturated-fat, low-cholesterol diet to lower cholesterol levels. At year 1, total cholesterol levels in the treatment group were lowered by 18 percent and LDL-cholesterol levels by 25 percent. The AFCAPS/TexCAPS results showed that cholesterol lowering reduced the risk for a first-time major coronary event 37 percent. Major coronary events included fatal or nonfatal MI, unstable angina, or sudden cardiac death. The risk for MI was reduced 40 percent, unstable angina 32 percent, coronary revascularization procedures 33 percent, coronary events 25 percent, and cardiovascular events 25 percent. The cholesterol-lowering benefits in this study extended to both men and women as well as older adults. There were no significant differences between treatment and placebo groups in deaths from trauma or cancer or in cancer incidence.

A series of recent statin trials has now demonstrated that cholesterol lowering significantly reduces CHD

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endpoints in four types of patients covering the range of risk for CHD: those with CHD and high cholesterol levels; those with CHD and average cholesterol levels; those without CHD and with high cholesterol levels; and those without CHD and with average cholesterol levels. An overview analysis of 16 statin trials, which was published in mid-1997, showed that cholesterol lowering produces large and highly significant reductions in CHD deaths and all CHD (nonfatal heart attacks plus CHD deaths). Among patients with and without CHD, the analysis showed that cholesterol lowering significantly reduces cardiovascular disease (CVD) deaths, does not increase non-CVD deaths or cancer mortality or incidence, and consequently produces a significant reduction in total mortality. These results provide powerful evidence for the efficacy and safety of cholesterol lowering.

CHOLESTEROL LEVELS DECLINE IN ADOLESCENTS

A new analysis of data from the National Health and Nutrition Examination Surveys shows that the average total cholesterol level in adolescents 12 to 17 years of age declined from 167 mg/dL in 1966–1970 to 160 mg/dL in 1988–1994. This 7 mg/dL reduction is somewhat smaller than that seen in adults over the same period, but the overall trend is nevertheless downward.

The decline in adolescents' cholesterol levels coincides with a decline in intakes of saturated fat, total fat, and cholesterol among 12- to 17-year-olds. The average amount of fat consumed by 12- to 17-year-olds dropped from 37 percent of calories in 1971–1974 to approximately 34 percent of calories in

1988–1994. Saturated fat intake decreased from about 14 percent to 12 percent of calories in the same timeframe. Daily intake of cholesterol has also declined in this age group, from 350 mg in 1971–1974 to 265 mg in 1988–1994.

NCEP COORDINATING COMMITTEE MEETING FOCUSES ON MANAGED CARE

Managed care was the focus of the NCEP's Coordinating Committee meeting held this past June. Coordi-

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nating Committee members heard presentations from representatives of the managed care industry, the National Committee for Quality Assurance (NCQA), and the Health Care Financing Administration (HCFA).

Mr. Jeff Emerson, president and chief executive officer of NYLCare, told the committee that health care costs are expected to continue to increase for a variety of reasons, including: an aging population; increases in technology without health care planning; increased costs of pharmaceuticals, hospitals, and physicians; and federally or locally mandated benefits.

According to Mr. Emerson, approximately 50 percent of health care dollars are currently spent by

government agencies, and it is expected that government spending will continue to account for half of all spending. In the near future, the government will become a larger part of the health care system, and as such, will wield more power to direct future efforts and act as a driving force behind new initiatives and technologies.

In response to rising health care costs, Mr. Emerson noted, most employers have tried to move into managed care. Current estimates are that 86 percent of those covered by insurance participate in some type of managed care plan. In response, managed care organizations market themselves to employers in a variety of ways. Recently, distinctions among plans have been made in the area of quality of care, as shown by performance measures and disease state management programs. Because the current and future health care markets are consumer-oriented, providing quality care continues to grow more important.

Dr. Cheryl Warner, a clinical consultant with Harvard Pilgrim Health Care (HPHC), offered a clinical viewpoint on adopting and implementing guidelines in the managed care environment. HPHC currently has cholesterol screening and treatment guidelines that were developed by a strategic planning group of local physicians. In response to NCQA requirements, the screening guidelines are revised and disseminated to both members and providers every 2 years. Treatment guidelines are also revised at these times and are sent to providers. According to Dr. Warner, HPHC looks to the NCEP for science-based, nationally accepted guidelines that are immediately transferable. When implementing guidelines, health plans must also consider cost-effectiveness, practice settings, and consumer needs.

Dr. Warner gave examples of implementation strategies used for cholesterol screening guidelines:



- Communication through newsletters and various other forms of education are used to inform both members and providers about screening policies.
- In some cases, automated reminder systems are used.
- Employees are regularly offered onsite health risk assessments and interventions by employers.
- Providers receive aggregate and provider-specific outcome data, primarily based on the Health Plan Employer Data and Information Set (HEDIS) measures, so that they can assess their progress.

Dr. Joseph Thompson, vice president of NCQA, stated that NCQA is a private, not-for-profit organization run by a widely representative board. It is not part of the managed care industry or HCFA. NCQA has three main constituency groups: consumers, purchasers, and delivery system representatives. Its mission is to enable managed care organizations to be accountable by providing information on the quality of care they provide to patients and purchasers. NCQA has two major activities: accreditation and performance review. The first looks at how health plans ensure quality, and the second measures the actual quality of care provided.

Dr. Thompson explained that the accreditation review looks at several major areas including quality improvement and preventive health services. Currently, NCQA requires that health plans adopt and disseminate guidelines. The way in which health plans develop and use guidelines is evaluated by the accreditation review team: how the guidelines relate to the clinical literature, mechanisms for updating and reviewing the guidelines, and how

the guidelines are disseminated. Health plans that cannot demonstrate how guidelines are used and what impact they have on quality of care do not receive full accreditation.

Dr. Thompson stated that HEDIS performance measures can be used to provide an “apples-to-apples” comparison of performance among health plans. The draft for the next round of HEDIS measures (1999) includes two cholesterol performance measures. Coordinating Committee members and Dr. Thompson discussed issues surrounding the proposed cholesterol measure for


... HEDIS performance measures can be used to provide an “apples-to-apples” comparison of performance among health plans.


target LDL-cholesterol levels in patients with CHD. Coordinating Committee members voiced strong support for the implementation of a HEDIS cholesterol performance measure that uses an LDL-cholesterol of ≤ 100 mg/dL as the treatment goal for CHD patients. Citing a variety of crucial scientific and health policy shortcomings, Coordinating Committee members criticized an NCQA proposal that would use an LDL-cholesterol target of ≤ 130 mg/dL for CHD patients.

Dr. Jeffery Kang, director of HCFA's Office of Clinical Standards and Quality, stated that when the Clinton administration was trying to implement health care reform, there were

three underlying assumptions of what was needed: managed competition, a universal budget, and universal coverage. At present, two of the three exist. Universal coverage is still lacking.

Dr. Kang reported that HCFA is getting more involved in managed care. HCFA has a capitated payment per beneficiary. Participating managed care organizations must provide a minimum set of services for each patient. Outcome measures are needed to assess the performance of health plans on a population basis. HCFA is interested in performance measures such as those used in HEDIS 3.0 because it can use the measures to hold managed care organizations accountable for both health care status and individual clinical processes.

Performance measures are also used by HCFA to eliminate from Medicare health plans or providers that are not meeting the measures. This process drives quality improvement and provides information about what works to improve health status. The objective is to bring the wide distribution of performance closer to 100 percent. Performance measure reports are also provided to the public so that consumers have information about quality of care.

Dr. Kang stated that one issue surrounding the achievement of performance measures is not a lack of knowledge, but behavior. For performance measures to work, specific providers need to be aware of their own performance so that they do not overestimate how often measures are being met.

The NCEP Coordinating Committee plans to continue working with the managed care industry to develop strategies for cholesterol screening and cholesterol lowering that will benefit a large portion of patients. ■

Minority Populations

TOMORROW'S HEALTH DEPENDS ON TODAY'S INVESTMENTS

Historically, the NHLBI has conducted many programs that help all Americans lead longer, healthier lives with improved quality of life. Today, the NHLBI continues to increase its outreach to the Nation's many cultural and ethnic groups, each having special needs and requiring a diversity of outreach activities. The NHLBI believes that expanding research application, dissemination, and education activities will lead to successful programs that will herald a new era of progress to eliminate disparities in heart health among minorities.

Dr. Claude Lenfant, director of the NHLBI, pledges the NHLBI's continued commitment to minority-specific programs: "The successful minority projects highlighted in this issue of *HeartMemo* assert the importance of building active partnerships. . . . By working with communities and capitalizing on their strengths, together we can invest in promoting cardiovascular health for all people."

NHLBI TARGETS CARDIOVASCULAR DISEASE IN NATIVE AMERICANS

The traditional lifestyles of American Indians and Alaska Natives (AI/ANs) included good nutrition and lots of physical activity. Unfortunately, as more native people take on unhealthy Western lifestyles characterized by a high-fat, high-calorie diet and low levels of physical activity, the burden of cardiovascular disease (CVD) has increased in many native communities. These adopted habits, combined with poor access to health care and health

information, have made CVD the leading cause of death among AI/ANs over age 45 today. To foster a return to healthy traditions and reduce heart disease among AI/ANs, the NHLBI has launched a new initiative, "Building Healthy Hearts for American Indians and Alaska Natives."

The goals of the initiative are to increase awareness of the risk factors that cause CVD and to promote heart-healthy lifestyles among AI/ANs through programming that is culturally sensitive, appropriate, and relevant. The task is complex because, although

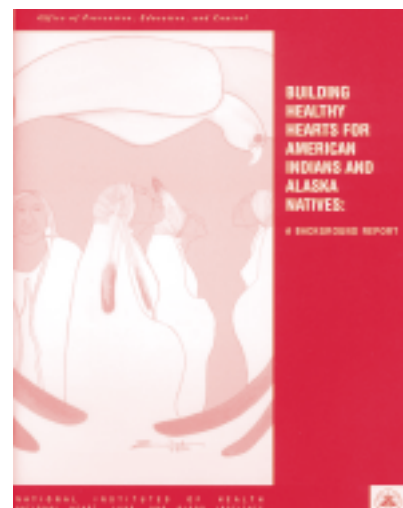
...each tribe presents a unique pattern of risk factors, diseases, and culture.

AI/ANs share some similarities, there are also substantial differences. Languages, health care delivery systems, and behaviors vary among communities and regions. And each tribe presents a unique pattern of risk factors, diseases, and culture.

An NHLBI background report clarifies the health status of AI/ANs and illuminates the challenges and opportunities involved. For example, it explains that data on AI/ANs are limited because the population has been overlooked and misclassified in the past. However, the report also stresses that understanding and incorporating AI/AN traditions, such as the impor-

tance of extended families, can bolster the success of community interventions. The report sets the stage for action by providing a profile of AI/ANs, including known demographics, CVD mortality and risk factors, culture and health perceptions, existing health promotion programs, and recommended strategies and models.

The initiative is targeting three tribal communities that were selected based on the prevalence of CVD risk factors and other sociodemographic characteristics. Many of the people in the targeted communities have



maintained their native traditions and language.

- The Ponca tribe of Oklahoma has about 2,500 members in the northern central part of the State. They are organized in a clan system that provides social support and leadership and helps preserve the tribe's traditions. The tribe's three leading health problems are diabetes, alcoholism, and heart disease.
- The Bristol Bay Area Health Corporation is a nonprofit health care provider that serves people in 32 villages in southwestern Alaska. The villages are not connected by roads, and the area is very isolat-

ed. Heart disease is one of its top three health problems.

- The Laguna Pueblo is located in New Mexico, west of Albuquerque. The 533,000-acre reservation includes six separate villages along the Rio San Jose Valley, with about 4,000 people.

Focus groups have been held in the target communities to help determine the content and type of health education materials to be developed.

The report is available on the Web at http://www.nhlbi.nih.gov/nhlbi/cardio/other/prof/na_bkgd.htm.

NEW REPORT AND WORKSHOPS FOCUS ON ASIAN AMERICANS AND PACIFIC ISLANDERS



As part of its Cardiovascular Health Initiative for Asian Americans and Pacific Islanders (AAPI), the NHLBI has prepared an eye-opening new background report and is developing two strategic workshops.

AAPIs comprise one of the fastest-growing ethnic groups in America, projected to number over 12 million by the year 2000. However, in spite of its size, the group's health status has largely been ignored or distorted, resulting in a widespread misperception that the group represents a model of health. In fact, the vitality of this vast, diverse group is seriously threatened by heart disease, its leading cause of death. And with contributing factors such as a smoking rate of up to 43 percent among Southeast Asian men, the long-term health prospects of AAPIs are at stake.

The new report, "Caring Families for Heart Health: Promoting Healthy Hearts for Asian Americans and Pacific Islanders," examines CVD in AAPIs, shattering the "healthy minority" myth that has surrounded them. It provides data on demographics, including age, composition,

geographic distribution, economic status, and access to health care. It also examines risk factors for CVD among AAPI groups, such as high cholesterol, hypertension, smoking, obesity, physical inactivity, and alcohol consumption. Finally, the report provides a blueprint for success by gathering profiles of programs from across the country that have worked in AAPI communities.

The NHLBI will reach out to AAPI communities through two strategy development workshops. With other health professionals and community leaders, the NHLBI will identify target audiences; analyze data on the groups' risk factors for CVD; and ascertain language, education, and cultural issues that affect those risk


Groups of all sizes and resource levels can use the handbook to build heart-health programs in Latino communities.


factors. Workshop participants will also evaluate community intervention programs and supporting health education tools and recommend appropriate communication channels for relaying health education messages.

The first workshop will concentrate on Asian Americans, who currently number 6.9 million people. Native Hawaiians, who comprise the majority of Pacific Islander Americans at 57.8 percent, will be the focus of the second workshop. The results of the workshops will be used to design culturally and linguistically appropriate programs for Asian Americans and Native Hawaiians.

COMMUNITY HEALTH PROMOTION FOR LATINOS MADE EASIER

The NHLBI's Latino Community Cardiovascular Disease Prevention and Outreach Initiative, *Salud para su Corazón* (Health for Your Heart), has added a new guide to its toolbox for health care professionals, community leaders, and advocates. *Salud para su Corazón—Bringing Heart Health to Latinos: A Guide for Building Community Programs* maps the way to planning, developing, implementing, and evaluating a community-based heart-health promotion project for Latinos.

The guide incorporates practical advice from *Salud para su Corazón*, NHLBI's innovative outreach initiative that promotes heart-healthy lifestyles among Latinos who are at risk for CVD. The initiative was shaped by social marketing principles, core cultural values of Latinos, formative research, and input from community leaders. *Salud para su Corazón* was successfully tested in the Washington, DC, metropolitan area. Educational materials were developed and distributed through various channels such as mass media, churches, health care providers, health fairs, parents' groups, and public health programs. The effort significantly increased awareness and knowledge of CVD and intentions to change behavior among the targeted audience.

Groups of all sizes and resource levels can use the handbook to build heart-health programs in Latino communities. They are encouraged to adapt steps in the guide or modify the steps to suit their particular needs.

The guide (#98-3796, \$3.00) and 7-minute companion video (#55-1018, \$5.00) are available from the NHLBI Information Center. For a complimentary copy of a set of eight easy-to-read bilingual brochures

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about heart health, call (800) 282-9126. Selected additional materials are available on the Web at http://www.nhlbi.nih.gov/nhlbi/cardio/latino/latin_pg.htm.

NEW COLLABORATION WILL ENHANCE HEALTH PROMOTION FOR AFRICAN AMERICANS

The NHLBI announced that it will team up with the Association of Black Cardiologists (ABC) to maintain the National Physicians' Network (NPN) and provide continuing education opportunities to improve cardiovascular health care for African Americans.

The NPN is a multidisciplinary

group of physicians formed by the NHLBI to help increase the practice skills of health professionals who provide care to black patients and encourage healthful behaviors in black communities. Since 1995, 140 physicians have joined the NPN.

The second component is a World Wide Web-based system to provide online self-study continuing education programs to clinicians and other health professionals who provide health care to African Americans. Said Glen Bennett, NHLBI coordinator for advanced technologies in health education, "The Web-based activities will help increase knowledge about the prevention, diagnosis, treatment, and management of cardiovascular and pulmonary diseases in African Americans and will also pro-

vide access to complementary patient education materials."

The ABC will assume full responsibility and leadership for the NPN. It will also use the Web site to facilitate activities and stimulate communication among NPN members. Members will be able to download slides and other information for use in their presentations to clinicians and public audiences.

Look for the Web site address in a future issue of *HeartMemo*. ■

Certified health education specialists may receive continuing education contact hours through NHLBI self-study programs on the Web at http://www.nhlbi.nih.gov/nhlbi/con-ed/ches_ce.htm.

Women

WOMEN'S HEALTH INITIATIVE UPDATE: RECRUITMENT IS SUCCESSFUL

The Women's Health Initiative (WHI) reached a milestone this fall as it met its recruitment goal of 68,000 women for the clinical portion of the NHLBI study, bringing the total number of women participating in the study to more than 160,000.

Since the 15-year study began in 1991, the WHI has examined the leading causes of death, disability, and frailty in postmenopausal women, including heart disease, breast and colorectal cancers, and osteoporosis.

"These volunteers are helping to provide the hard evidence for some of the toughest questions facing post-

menopausal women," said NHLBI Director Dr. Claude Lenfant. Researchers hope that the WHI will help answer these questions for the Nation's 37.5 million women—questions about the wisdom of using hormone replacement therapy (HRT), eating right, and taking calcium and vitamin D supplements.

The study has three parts: a clinical trial, an observational study, and a community prevention study. The clinical trial will test the long-term effects of HRT, which other studies have found may protect against heart disease and osteoporosis but may also put women at greater risk for breast cancer. The effects of a diet high in fruits, vegetables, and grains and low in fat will also be measured to determine whether the diet prevents breast and colorectal cancers and heart disease. And the role of

calcium and vitamin D in preventing bone fractures and colorectal cancer will be explored.

At press time, more than 93,000 women had already volunteered for the observational study, and minority women were being accepted through December. The observational study will try to determine whether cholesterol levels and changes in body weight predict health status. It will also examine the impact of HRT on heart disease and search for genetic markers that correspond to health and disease.

The community prevention study is seeking effective health promotion methods for women and will develop model programs for use nationwide. ■

Additional information is available on the Web at <http://www.nhlbi.nih.gov/nhlbi/whi1/>.

The National Center on Sleep Disorders Research

TRAFFIC SAFETY AND HEALTH AGENCIES TEAM UP TO BEAT DROWSY DRIVING

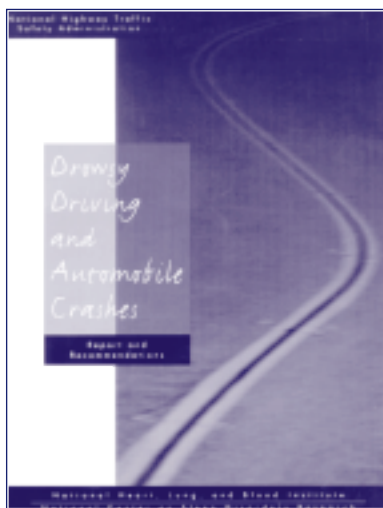
Asleep at the wheel. It's become a cliché to describe all sorts of lapses in attention, from the momentous to the mundane. But the problem of drowsy driving is not only real, it's deadly. The Department of Transportation estimates that drowsy driving causes 56,000 crashes every year, claiming over 1,500 lives and resulting in 40,000 injuries. That information comes in a joint report, "Drowsy Driving and Automobile Crashes," released this summer by the National Highway Traffic Safety Administration (NHTSA) and the NHLBI's National Center on Sleep Disorders Research (NCSDR). The report is part of a collaboration by the two agencies to combat drowsy driving through public education.

The report represents the first comprehensive review of the scientific literature and evidence on drowsy driving. The biology of sleep is explained, with an overview of the sleep-wake cycle and its dependence on two important factors, homeostasis and the circadian pacemaker. Homeostasis refers to the biological need to sleep, and the circadian pacemaker is the body's 24-hour clock. The causes and consequences of sleepiness are discussed, as are actions to prevent drowsy driving.

The report identifies three population groups that are at the highest risk for drowsy driving: young people age 16 to 29, especially males; shift workers, who typically get less sleep than day workers and whose sleep is disrupted by night work or long, irregular

work hours; and people with untreated sleep disorders such as sleep apnea syndrome and narcolepsy.

The NCSDR and NHTSA are launching educational activities aimed at combating drowsy driving. The NCSDR is focusing its efforts on young people, and NHTSA's focus is on shift workers, including young males.



Activities completed by the NCSDR in 1998 include:

- The development and distribution of an educational insert with messages about the dangers of inadequate sleep and drowsy driving in several *Scholastic* magazines targeted to high school students, teachers, and coaches.
- The convening of a workshop, "Strategy Development Workshop on Educating Youth About Sleep and Drowsy Driving," to identify priorities in educating youths.

Future educational efforts by the NCSDR will continue to focus on school-aged youths with messages about the relationship between sleep and health and performance, and the consequences of sleep deprivation.

In targeting shift workers for its educational initiatives, NHTSA will focus on a population that is likely to increase, because businesses that require shift workers are growing. The agency's initiatives include the award of approximately 15 pilot grants to address the issue. The grants will be available to a wide variety of organizations, from private businesses to community-based traffic safety programs. In addition, NHTSA will advocate for adequate highway rest areas and continue its research into an electronic drowsiness detection and warning system for drivers.

"This is an important collaborative effort because it brings together both the public health and traffic safety issues related to drowsy driving," said Dr. Claude Lenfant, director of the NHLBI.

The report recommends that people take the following steps to avoid becoming drowsy while driving: get sufficient sleep, avoid alcohol, and limit driving between midnight and 6 a.m. ■

The report is available on both agencies' Web sites, <http://www.nhtsa.dot.gov> and <http://www.nhlbi.nih.gov>.



After smoking, overweight and obesity comprise the second most preventable cause of death in the United States.

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factors for diseases and conditions associated with obesity, and waist circumference.

Defining Overweight and Obesity

The guidelines' definition of overweight is based on research that relates BMI to the risk of death and illness. Overweight is defined as a BMI of 25 to 29.9 and obesity as a BMI of 30 and above—definitions consistent with those used by the World Health Organization and many other health organizations and countries. The definitions also agree with those in the 1995 *Dietary Guidelines for Americans*, published by the U.S. Department of Health and Human Services and the U.S. Department of Agriculture. The *Dietary Guidelines* publication sets policy for all nutrition education information targeted at the general public by the Federal government.

BMI describes body weight relative to height. It is equal to weight in kilograms (kg) divided by height in

meters squared (m^2). Thus the overweight threshold, or a BMI of 25, for a man or woman 5'6" tall would be 155 pounds. For a man or woman 6' tall, the overweight threshold would be at 186 pounds. The obesity threshold, or a BMI of 30, for someone 5'6" tall or 6' tall would be 186 pounds and 221 pounds, respectively. BMI usually correlates well with total body fat. But very muscular people may have a high BMI without excess body fat and, so, they do not have an added health risk.

The panel recommends that BMI be determined in all adults. People of normal weight should have their BMI reassessed in 2 years.

Health Risks Associated With Overweight and Obesity

Overweight and obese Americans are at increased risk of illness from hypertension, lipid disorders, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and other respiratory problems, and certain cancers.

A recent analysis of data from the third National Health and Nutrition Examination Survey (NHANES III) shows that, as BMI levels rise, average blood pressure and total cholesterol levels also increase, and average high-density lipoprotein (HDL, or the "good" cholesterol) levels decrease. In the survey, men and women in the highest obesity category had five times the risk of hypertension, high blood cholesterol, or both, compared with those of normal weight.

Assessing Risk Status

As noted, in addition to BMI, the guidelines recommend that health care professionals use two other measures to assess overweight and risk status—the presence of risk factors and waist circumference.

The risk factors to be evaluated include elevations in blood pressure, blood cholesterol, and glucose levels, and a family history of obesity-related disease. At a given level of overweight or obesity, patients with added risk factors are considered to be at a higher risk for health problems and require more intensive therapy and modification of any risk factors.

The panel found strong evidence from randomized controlled clinical trials that weight loss improves many of the risk factors. For example, weight loss lowers high blood pressure and high total cholesterol, and raises low levels of HDL. Similarly, weight loss decreases elevated blood glucose in obese and overweight persons.

The panel also found that waist circumference is strongly associated with abdominal fat. Excess abdominal fat is an independent predictor of disease risk. The panel found that waist circumference more accurately assesses abdominal fat and better predicts disease risk than calculations of a waist-to-hip ratio.

The guidelines state that, for men and women with a BMI in the range of 25 to 34.9, excessive waist circum-

ference—more than 40 inches in men or 35 inches in women—increases the risk of obesity-related disease beyond the risk of the BMI alone. For those with a higher BMI, waist circumference provides no added useful risk information.

Weight Loss Strategies

The new guidelines stress that there are no magic cures for weight loss. The most successful strategies for

weight loss include reduced calorie consumption, increased physical activity, and behavior therapy designed to improve eating and physical activity habits.

The guidelines recommend weight loss for persons with a BMI of 30 or more. Weight loss also is recommended for those with a BMI between 25 and 29.9, or who have a waist circumference greater than 40 inches in men and 35 inches in

women, and who have two or more risk factors. Overweight persons with a BMI between 25 and 29.9 who have fewer risk factors should prevent further weight gain.

The guidelines recommend that the initial treatment goal be the reduction of about 10 percent of body weight. The guidelines advise physicians to have patients try lifestyle therapy for at least 6 months before embarking on physician-prescribed drug therapy.

According to the guidelines, weight loss drugs approved by the U.S. Food and Drug Administration for long-term use should be tried only as part of a comprehensive weight loss program that also includes dietary therapy and physical activity. This therapy should be used with carefully selected patients (those with a BMI > 30 and no additional risk factors, or those with a BMI > 27 and two or more of the following risk factors—diabetes, high blood pressure, high blood cholesterol, and sleep apnea) who have been unable to lose weight or maintain weight loss with conventional nondrug therapies. The guidelines also give advice on the use of drug therapy during the weight maintenance phase of treatment. However, the guidelines caution that the safety and effectiveness of such drugs have not been demonstrated for use beyond 1 year.

Peer Review and Publications

The guidelines underwent an intensive peer review process, which involved 115 health experts from 59 professional societies, consumer groups, and government agencies represented on the Coordinating Committees of the National Cholesterol Education Program and the National High Blood Pressure Education Program, as well as the NIDDK's National Task Force on the Prevention and Treatment of Obesity and

GUIDELINES' RELEASE GENERATES MEDIA BLITZ

News of the guidelines' release flooded the airwaves—twice. Due to a leak of part of the guidelines before their official release, the story drew two rounds of print, radio, and television coverage in the United States and other countries.

The initial leak caused early coverage to report that the Federal government had shifted the BMI definition, instantly making 29 million more Americans overweight. In fact, the guidelines' BMI cut point for overweight supports that used in the 1995 *Dietary Guidelines for Americans*, as well as by many other health organizations.

A second media blitz resulted when the guidelines were officially released about 2 weeks after the leak. Dr. F. Xavier Pi-Sunyer, chair of the expert panel, and other panel members gave numerous interviews. For example, Dr. Pi-Sunyer appeared on such programs as ABC's "Good Morning America" and PBS's "NewsHour with Jim Lehrer."

"The report sparked heated debate in the media about the BMI cut point," recalled Karen Donato, executive director of the expert panel and coordinator of the NHLBI's Obesity Education Initiative. "But, fortunately, the panel's message about the scientific rationale underlying the definitions ultimately carried the day.

"And most importantly, Americans heard over and over that it's important to maintain a healthy weight. The media coverage was monitored and an estimate of the number of audience impressions was made," she continued. "This is a standard media industry method for estimating how many people read or view a story.

"The estimated audience impressions totaled an amazing 438 million persons. And the coverage hasn't stopped yet.

"And that's the best news. We hope that physicians and other health care providers and the public now know that there's a clinical tool to help make weight loss possible."

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selected members of the North American Association for the Study of Obesity (NAASO).

The guidelines are available in various forms. For a copy of the full report, primary care providers, researchers, academic institutions, and other interested health care practitioners should contact the NHLBI Information Center.

The report also is available online at http://www.nhlbi.nih.gov/nhlbi/cardio/obes/prof/guidelns/ob_home.htm. In addition to the report, the Web site offers an executive summary of the guidelines; summary evidence tables of the randomized controlled trials; a description of the evidence-based model; consumer tip sheets on how to eat more healthily; a BMI calculator; a BMI table; and a press release about the guidelines.

The report or its summary is available from other sources as well. The complete evidence report was published as the September supplement of *Journal of Obesity Research*. The executive summary appeared in the September 28 issue of *Archives of Internal Medicine* and in the October issues of *American Journal of Clinical Nutrition* and *Journal of the American Dietetic Association*.

In collaboration with the NAASO, the NHLBI has developed an abbreviated version of the guidelines for use by primary care providers. Called *The Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity*, this useful tool will be available from the NHLBI Information Center early next year. ■

Additional information is available on the Web at http://www.nhlbi.nih.gov/nhlbi/cardio/obes/prof/guidelns/ob_home.htm.



HeartNet

The following Internet sites have resources for both patients and professionals on the prevention and treatment of obesity.

American Diabetes Association

<http://www.diabetes.org>

This Web site is really two sites: one for professionals and one for the public. The professional area contains clinical practice recommendations, current legislation of interest, two online journals, applications for research funding, ordering information, and information on meetings. The public area contains many similar features as well as easy-to-understand information on diabetes, press releases on the latest research, and links to other sites of interest. You can also read the stories of patients living with diabetes or submit one of your own.

American Dietetics Association

<http://www.eatright.org>

Find a new tip on eating right every day of the week, plus fact sheets on selected nutrition topics and advice on finding a dietitian. In addition, this site provides information on the American Dietetics Association's current activities and advocacy efforts as well as links to other professional organizations.

National Institute of Diabetes and Digestive and Kidney Diseases

<http://www.niddk.nih.gov>

Here you will find information about an NIDDK program called the Weight Information Network—publications, a quarterly newsletter for health professionals, information on current projects, a list of university weight loss centers, and links to other sites of interest. The site also contains publications in many of NIDDK's other content areas, including diabetes, digestive diseases, endocrine and metabolic diseases, hematologic diseases, kidney diseases, and urologic diseases.

Tufts University Nutrition Navigator

<http://www.navigator.tufts.edu>

This site provides lists and ratings of many nutrition-related sites. Lists can be viewed by type of user—parents, children, women, journalists, health professionals, and educators—and by topic. There is also a search function. Ratings are based on the accuracy and depth of information, frequency of updates, and ease of use. ■

Check out a new interactive Web site that was launched as part of the NHLBI's National Cholesterol Education Month. For details, see story on page 9.



HeartFacts

COMBINED PREVALENCE BY PERCENT OF U.S. POPULATION OF OVERWEIGHT AND OBESITY (BMI \geq 25 kg/m²) FOR ADULTS, BY GENDER AND RACE/ETHNICITY, 1960-94*

	NHES I** 1960-62	NHANES I** 1971-74	NHANES II** 1976-80	HHANES** 1982-84	NHANES III*** 1988-94
Both sexes	43.3	46.1	46.0		54.9
Men	48.2	52.9	51.4		59.4
Women	38.7	39.7	40.8		50.7
White men	48.8	53.7	52.3		61.0
White women	36.1	37.6	38.4		49.2
Black men	43.1	48.9	49.0		56.5
Black women	57.0	57.6	61.0		65.8
White, non-Hispanic men			52.0		60.6
White, non-Hispanic women			37.6		47.4
Black, non-Hispanic men			48.9		56.7
Black, non-Hispanic women			60.6		66.0
Mexican-American men				59.7	63.9
Mexican-American women				60.1	65.9

PREVALENCE BY PERCENT OF U.S. POPULATION OF OBESITY (BMI \geq 30 kg/m²) FOR ADULTS, BY GENDER AND RACE/ETHNICITY, 1960-94*

	NHES I** 1960-62	NHANES I** 1971-74	NHANES II** 1976-80	HHANES** 1982-84	NHANES III*** 1988-94
Both sexes	12.8	14.1	14.4		22.3
Men	10.4	11.8	12.2		19.5
Women	15.1	16.1	16.3		25.0
White men	10.1	11.4	12.0		20.0
White women	13.7	14.7	14.9		23.5
Black men	13.9	15.9	15.2		20.6
Black women	25.0	28.6	30.2		36.5
White, non-Hispanic men			12.0		19.9
White, non-Hispanic women			14.8		22.7
Black, non-Hispanic men			15.0		20.7
Black, non-Hispanic women			30.0		36.7
Mexican-American men				15.4	20.6
Mexican-American women				25.4	33.3

*age-adjusted

**age 20-74

***age 20 and older

Abbreviations: NHES= National Health Examination Survey
 NHANES=National Health and Nutrition Examination Survey
 HHANES=Hispanic Health and Nutrition Examination Survey

Healthy Eating Starts With Healthy Food Shopping

The new National Heart, Lung, and Blood Institute Obesity Guidelines say that you can reduce the time you spend cooking healthy by using a shopping list and keeping a well-stocked kitchen. Read the labels as you shop and pay attention to serving size and servings per container. Compare the total calories in similar products and choose the lowest calorie ones.

So, shop for quick, low-fat food items and fill your kitchen cupboards with a supply of lower calorie basics like the following:

- Fat-free or low-fat milk, yogurt, cheese, and cottage cheese
- Light or diet margarine
- Eggs/egg substitutes

- Sandwich breads, bagels, pita bread, English muffins
- Soft corn tortillas, low-fat flour tortillas
- Low-fat, low-sodium crackers
- Plain cereal, dry or cooked
- Rice, pasta

- White meat chicken or turkey (remove skin)
- Fish and shellfish (not battered)
- Beef: round, sirloin, chuck arm, loin, and extra lean ground beef
- Pork: leg, shoulder, tenderloin
- Dry beans and peas

- Fresh, frozen, canned fruits in light syrup or juice
- Fresh, frozen, or no salt added canned vegetables



- Low-fat or nonfat salad dressings
- Mustard or catsup
- Jam, jelly, or honey
- Herbs and spices
- Salsa



Source: The National Heart, Lung, and Blood Institute in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.



HeartScience

SURPRISING STUDY FINDS BYPASS SURGERY AND ANGIOPLASTY EQUALLY SAFE FOR WOMEN AND MEN

Women who undergo coronary artery bypass graft surgery (CABG) or balloon angioplasty treatments have survival rates that are nearly identical to men's.

That was the conclusion of a major clinical trial supported by the NHLBI. Five years after receiving CABG or angioplasty, 87 percent of women enrolled in the Bypass Angioplasty Revascularization Investigation (BARI) had survived, compared to 88 percent of the men. The results were published in the September 29 issue of *Circulation*. Prior studies on the two treatments had shown higher rates of death and complications among women.

"This is good news for women with heart disease who may have been concerned about reports that they were at greater risk than men for these procedures. Heart disease remains the number one killer of American women, and this study shows that two important treatment strategies are just as safe and effective for them as they are for men," said NHLBI Director Dr. Claude Lenfant.

The BARI study, which was performed between 1988 and 1991, randomly assigned 1,829 patients with multivessel coronary artery disease to either bypass surgery or angioplasty. Twenty-seven percent (489) were women and 73 percent (1,340) were men. The study's main findings, published in 1996, showed that both

treatments are effective and result in similar mortality rates.

The newly released data show that both long-term and in-hospital survival rates were comparable among the men and women studied. Being female was identified as an independent predictor of higher survival; women's risk of death was only 60 percent as compared to the risk for men.

"Heart disease remains the number one killer of American women, and this study shows that two important treatment strategies are just as safe and effective for them as they are for men."

The new study was undertaken, in part, to see how advances in technology and surgical techniques have affected women, and the study's authors noted that such advances may account for the improved results.

The women studied were older and had higher incidences of heart failure, diabetes, high blood pressure, high cholesterol, unstable angina, and other coexisting diseases than the men did. However, the women had a similar degree of heart disease. The authors intend to investigate these seemingly contradictory findings.

HERS SHOWS MIXED RESULTS FROM ESTROGEN/PROGESTIN

The Heart and Estrogen/Progestin Replacement Study (HERS) found that the use of estrogen plus progestin in postmenopausal women with heart disease failed to prevent further heart attacks or death from coronary heart disease (CHD) overall. The regimen also increased the risk of clots in the veins (deep vein thrombosis) and lungs (pulmonary embolism). However, the results suggested that estrogen/progestin therapy may have protective effects in the long run.

The 2,763 postmenopausal women in the 4-year study were randomly assigned to either estrogen plus progestin or a placebo. The results of the study, which was sponsored by Wyeth-Ayerst Laboratories, were published in the August 19 issue of the *Journal of the American Medical Association*.

Several aspects of the results were surprising. The estrogen/progestin regimen reduced LDL (bad cholesterol) by 11 percent and increased HDL (good cholesterol) by 10 percent, yet it did not prevent heart attacks or death from CHD. Previous studies had found lower rates of CHD in postmenopausal women who take estrogen. The HERS authors suspect that the effect of estrogen/progestin treatment changes over time. They noted that women had a higher risk in the first year of hormone replacement therapy (HRT) for CHD events, such as heart attacks. That trend was eventually reversed. By the end of the study, there was no significant difference in CHD risk between the HRT group and the placebo group.

(continued on page 22)

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The early increase in CHD events may have resulted from negative effects of treatment on clot formation. Over time, these effects were gradually outweighed by the positive effects of favorable cholesterol changes, resulting in decreased atherosclerosis. Because many of the women enrolled in HERS during the third and fourth years and received HRT for only 2 years, there was insufficient time for the positive impact of HRT on cholesterol to reduce the risk of CHD.

The NHLBI continues to advise postmenopausal women to consult their physicians about HRT, because the treatment decision is complex and depends on the individual. Factors to consider include each woman's family history and health, especially incidences of cancer and osteoporosis, as well as alternatives for preventing CHD.

FRAMINGHAM CELEBRATES 50 YEARS AS THE HEART OF AMERICA

If you've always thought that America's heartland was in the Midwest, think again. Since 1948, the town of Framingham, MA, has been at the forefront of cardiovascular research. Through the Framingham Heart

Study, scientists from the NHLBI, Boston University, and around the world have studied the long-term health of two generations of Framingham families. Fifty years of data collected in Framingham have produced more than 1,000 scientific papers, transforming America's understanding of how heart disease develops and how we can prevent and treat it.

Incredibly, a typical day's menu in 1948 often featured donuts, cheeseburgers, fries, and cigarettes—all without a twinge of guilt.

U.S. Rep. Edward J. Markey (D-MA), and Massachusetts State representatives, was moderated by Dr. Timothy Johnson of ABC television.

Before Framingham, the world was very different from what it is today. Little was known about how lifestyle factors influenced health. Incredibly, a typical day's menu in 1948 often featured donuts, cheeseburgers, fries, and cigarettes—all without a twinge of guilt. Most physicians believed that atherosclerosis was a normal part of the aging process, and that older people needed high blood pressure to help their hearts work. The relationship between cholesterol and heart attacks was unknown. Framingham uncovered astonishing evidence that cardiovascular disease (CVD) is far from inevitable (see sidebar).

The phenomenon of Framingham continues. Researchers are still using previously and newly collected data. For example, they are using DNA collected from participants since the study's start to identify genes for diseases. They hope to learn whether disorders such as obesity, hypertension, diabetes, and Alzheimer's disease run in families. Researchers are also trying to understand how diseases affect minorities, women, and the elderly. And they are pursuing additional risk factors that may be associated with CVD. ■

In September, Framingham orchestrated a 2-day, townwide tribute to mark its historic role. The anniversary celebrated and thanked the Heart Study staff and the more than 10,000 residents who have been involved in the study. The gala, which featured such speakers as U.S. Surgeon General Dr. David Satcher, NHLBI Director Dr. Claude Lenfant,

HEART DISEASE AND STROKE—HEALTHY PEOPLE 2000 REVIEW

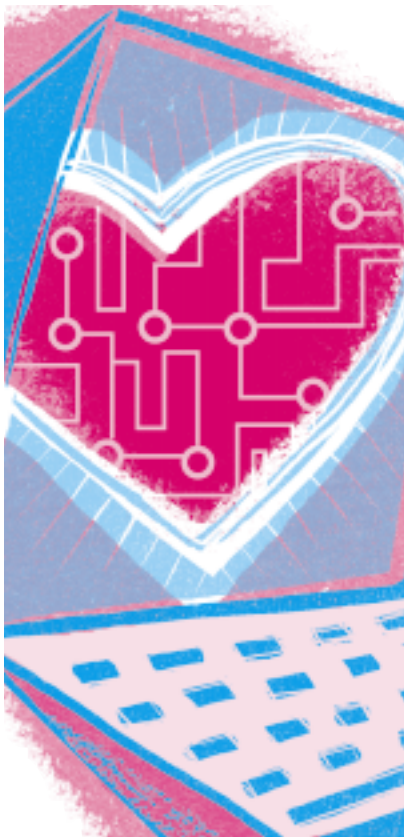
Healthy People is the national prevention initiative that identifies opportunities to improve the health of all Americans. On February 3, 1999, a progress review of Year 2000 Objectives for Heart Disease and Stroke with U.S. Surgeon General Dr. David Satcher will be conducted on the campus of NIH and broadcast to the public via satellite and Webcast. Interested organizations and individuals are encouraged to participate by submitting comments and questions during the broadcast by telephone, fax, and e-mail. For further information about viewing the progress review or hosting a satellite downlink site, please visit the NHLBI home page at <http://www.nhlbi.nih.gov>.

THANKS, FRAMINGHAM!

Since its start in 1948, the Framingham Heart Study has amassed breakthroughs and landmark reports in many areas, including heart disease, stroke, osteoporosis, dementia, arthritis, diabetes, eye disease, cancer, and genetics. Here are some related to the heart:

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1956: Findings on progression of rheumatic heart disease reported. | 1988: High levels of HDL cholesterol found to reduce risk of death. Association of type "A" behavior with heart disease reported. Isolated systolic hypertension found to increase risk of heart disease. |
| 1959: Factors found that increase the likelihood of heart disease. Some heart attacks discovered to be "silent," or painless. | 1990: The amino acid homocysteine found to be possible risk factor for heart disease. |
| 1960: Cigarette smoking found to increase the risk of heart disease. | 1993: Mild isolated systolic hypertension shown to increase risk of heart disease. Major report predicts survival after diagnosis of heart failure. |
| 1961: Cholesterol level, blood pressure, and electrocardiogram abnormalities found to increase the risk of heart disease. | 1994: Enlarged left ventricle shown to increase the risk of stroke. Lipoprotein (a) found as possible risk factor for heart disease. Risk factors for atrial fibrillation described. Apolipoprotein E found to be possible risk factor for heart disease. |
| 1967: Physical activity found to reduce the risk of heart disease, and obesity found to increase the risk. | 1995: First Framingham report on diastolic heart failure published. OMNI Study of Minorities begins. |
| 1974: Overview of diabetes, its complications, and its association with CVD described. | 1996: Progression from hypertension to heart failure described. |
| 1976: Menopause found to increase the risk of heart disease. | 1997: Cumulative effects of smoking and high cholesterol on the risk for atherosclerosis reported. Impact of an enlarged left ventricle and risk for heart failure in asymptomatic individuals investigated. |
| 1977: Effects of triglycerides and LDL and HDL cholesterol described. | 1998: New risk prediction formulas to calculate a patient's risk for developing coronary disease over the next 10 years published. Work identifying a gene associated with hypertension in Framingham men published. |
| 1978: Psychosocial factors found to affect heart disease. Atrial fibrillation found to increase the risk of stroke. | |
| 1981: Filter cigarettes found to give no protection against coronary heart disease. Major report issued on relationship of diet and heart disease. | |
| 1983: Reports issued on mitral valve prolapse, which causes a backward leak of blood between heart chambers. | |
| 1987: High blood cholesterol levels found to correlate directly with risk of death in young men. Fibrinogen, which allows blood to clot more easily, found to increase the risk of heart disease. | |

Additional information is available on the Web at <http://www.nhlbi.nih.gov/nhlbi/fram>.



Access to technology, Dr. Ornato concluded, could transform the heart attack patient's experience...

(continued from page 3)

York, spoke about the need to balance accessibility and confidentiality regarding patients' health information. Electronic data could allow physicians to access their patients' information from any location, and institutions could better organize the information and link it to critical pathways.

However, the potential threats are also considerable. Hackers could access medical records with motives ranging from curiosity to blackmail, and disreputable employers and insurance companies could use the information to discriminate against people on the basis of their medical conditions. Dr. Clayton called for social policy to safeguard medical records by building firewalls around the data and tracking their use. Until central issues of privacy are resolved, he said, it will be difficult to reap technology's benefits.

Another missing piece of the puzzle that was highlighted is universal

health data standardization, which must be in place before users are able to share data. Clinicians, researchers, insurers, and others have their own ways of collecting, organizing, and storing information. Until they reach a consensus on how to handle health data, their attempts to build electronic bridges across disciplines will be stymied.

Next, attendees heard from Dr. Joseph Ornato, professor and chairman, Department of Emergency Medicine, Virginia Commonwealth University, Richmond. Dr. Ornato summed up the major obstacles to the NHAAP's goal of reducing the time for patient and bystander action in response to heart attack symptoms. They include psychological barriers in patients, such as fear and embarrassment; difficulties faced by emergency medical services (EMS) providers, such as the limited availability of electrocardiographs (ECGs) in the field; variations among timepieces, from wall clocks

to watches to defibrillators, which can result in treatment delays of precious minutes; and lack of access to medical records by both EMS and emergency department providers.

Access to technology, Dr. Ornato concluded, could transform the heart attack patient's experience: "The paramedic would evaluate the patient, do a 12-lead ECG, and send it to the physician at the hospital via a telemedicine link. . . . This system could offer the public prompt medical assistance at relatively low cost and with no embarrassment, as well as expert assistance in deciding whether hospitalization is necessary. . . . All medical devices would contribute time-synchronized data on a wireless network . . . and the system would be integrated into a quality improvement followup mechanism. Within a system such as this, the NHAAP could achieve its goals."

The second half of the symposium was organized around proposals for using technology to further the mission of the NHAAP in five areas: telehealth; education of the public, patients, and health care providers; medical records access; diagnostic and treatment decision support; and large-scale database access and mining. All share the requirement that patients and providers overcome technophobia and learn how to use technology.

Attendees heard that telehealth technologies are being tested in exciting ways, from facilitating "electronic house calls," in which patients and clinicians interact using real-time video, to supporting rural hospitals with limited resources. For example, patients with chronic conditions were provided with home equipment that allowed off-site nurses to have visual contact with them and monitor their vital signs and medication compliance. Physician assistants at rural hospitals have administered thrombolytic therapy to patients under the

guidance of physicians at larger hospitals using video links. And ambulances were equipped with cellular technology to allow real-time diagnosis by hospital physicians during patient transport. Implementation of the proposed technologies could range from relatively simple, low-cost solutions to sophisticated, expensive alternatives.

The education of consumers and providers has encompassed a number of technologies, according to presenters. The Rapid Early Action for Coronary Treatment (REACT) research program, sponsored by the NHLBI, has used a variety of large and small media in an effort to debunk myths associated with heart attacks and encourage the public to seek immediate treatment for heart attacks. Interactive Web sites allow consumers to get answers to their health-related questions, perform health risk assessments, and even communicate with providers. Public kiosks are also being used to deliver health education. These technologies demand flexibility because users' information needs and comfort levels vary considerably.

The symposium returned then to the theme of patient data. Electronic medical records are becoming increasingly widespread, but their potential remains untapped due to sluggish transmission, limited data storage capabilities, security concerns, and lack of standardization. Speakers predicted that as Internet bandwidth increases, data transfer will speed up. Portable information storage devices, such as "smart cards," may also allow for easy, low-cost access to records. And large-scale initiatives to develop uniform data standards are under way.

Diagnosis and treatment decision support mechanisms are also being developed. Interactive Web-based decision trees can be used to help patients evaluate their symptoms and

decide whether to call 9-1-1. Likewise, patients can use in-home ECGs linked to hospitals to help them and their physicians quickly determine appropriate action.

This area, however, is perhaps the most complex in terms of human behavior. Dr. Vimla Patel, professor and director, Cognitive Studies in Medicine, Centre for Medical Education, McGill University, Montreal, explained that individuals base health decisions on their own opinions, which are influenced by their culture and values. Because of this great diversity, one size definitely does not fit all. Dr. Patel stressed the need to understand people's thought processes in order to change them and, therefore, change their actions.

Finally, several speakers reviewed large-scale database initiatives. Dr. James Cimino, associate professor, Department of Medical Informatics, Columbia University, New York, described Columbia's use of "infobuttons," which link patient information to online resources to support clinical decision making. Other panelists discussed large database projects, such as the National Registry of Myocardial Infarction and the Cooperative Cardiovascular Project, sponsored by the Health

Care Financing Administration. The projects collect data on myocardial infarction patients and their treatment, including treatment delays, which can help hospitals benchmark their progress in implementing goals such as those of the NHAAP. Ideally, a universal data registry will be developed to put data-sharing to optimal use.

The symposium spawned a subsequent request for proposals on medical informatics by the NLM and supported by the NHLBI. Ultimately, 20 applications were received, and 8 were awarded a total of \$800,000 in contract funding to support them in planning their projects. The projects will address the application of medical informatics to patient and bystander reaction, emergency transport, and emergency department response across a diverse range of ethnicities, age groups, regions, and socioeconomic groups. Future funding may be directed to the implementation and widespread deployment of some of the projects. It is the hope of the NLM, the NHLBI, and the AHCPR that the seeds that were sown at the symposium last spring will germinate into high-tech ways to recognize and treat patients with a heart attack more rapidly. ■

The symposium spawned a subsequent request for proposals on medical informatics by the NLM and supported by the NHLBI.



New at the NHLBI Information Center

La Anemia Falciforme (#4086, single copy free). This fact sheet, a Spanish-language version of the fact sheet *Sickle Cell Anemia*, reviews this inherited blood disorder characterized by chronic anemia and episodes of pain. Caused by a hemoglobin gene mutation that developed centuries ago, sickle cell anemia occurs in 1 out of 12 African Americans. This fact sheet describes the causes and symptoms of this condition, how it is detected and treated, and how to cope with the diagnosis. The English-language version is also available (#4057, single copy free).

Insomnia: Assessment and Management in Primary Care (#4088, \$2.50). This 16-page report presents up-to-date information on insomnia and highlights the role of the primary care physician in recognizing and managing this condition. The publication includes questions that can be incorporated into the review of symptoms. It also describes behavioral treatments such as relaxation therapy, sleep restriction therapy, and stimulus control, in addition to pharmacological treatments such as hypnotics, antidepressants, and other medications. The report will soon be available on the Web at <http://www.nhlbi.nih.gov>.

JNC VI Guide to Prevention and Treatment of Hypertension laminated card (#55-888, single copy free). Risk stratification and treatment recommendations from *The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC VI) are reproduced on an 8 1/2" x 11" laminated card for easy reference. This is a convenient clinical tool designed to help professionals stratify hypertension patients by blood pressure stage and cardiovascular risks and determine goal blood pressure and specific treatment, as recommended in the new clinical practice guidelines. The card is also available on the Web at <http://www.nhlbi.nih.gov>. ■



Mark Your Calendar

• February 11-14, 1999: Sixth International Kawasaki Disease Symposium, sponsored by the American Heart Association's Councils on Cardiovascular Disease in the Young, Clinical Cardiology, and Cardiovascular Radiology and the Japan Kawasaki Disease Research

Center. Kawasaki disease is an acute febrile illness of childhood that causes coronary artery aneurysms, heart attacks, and sudden death in some children. It is believed to be the leading cause of acquired heart diseases in children in the United States. The symposium presents the latest developments in research and treatment for the disease and encourages multidisciplinary investigation. Waikoloa, Hawaii. Call 301-694-3287 or check this Web site: <http://www.americanheart.org/Scientific/confer/Kawasaki/index.html>.

• March 24-27, 1999: 39th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, sponsored by the American Heart Association's Council on Epidemiology and Prevention. This meeting will bring epidemiologists, physicians, biostatisticians, and other health scientists the latest in population trends and population surveillance for cardiovascular disease, causes of cardiovascular disease, results of treatment and prevention trials, and new techniques in preventive cardiology. Orlando, Florida. Call 301-694-3287 or check this Web site: <http://www.americanheart.org/Scientific/confer/Epi/>. ■



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HeartMemo is a National Heart, Lung, and Blood Institute (NHLBI) publication for health professionals working in disciplines and settings related to cardiovascular health. *HeartMemo* reports on the activities of the NHLBI's national education programs, projects, initiatives, and research advances and on other news of interest to the field. Readers are urged to submit information on current treatment and prevention activities as well as research findings and activities.

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